

# **Dedicated Funding for University Maritime Research: Issues and Opportunities**

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# **United States Marine Transportation System, (MTS)**

- **26,000 plus miles of commercial navigation channels and 9,584 commercial ports,**
- **In 2007, vessels carried 77.7% by weight of all imports and exports of the United States.**
- **In 2006, our domestic MTS carried 561.6 billion short ton miles of cargo,**
- **13 million jobs are supported by the MTS**
- **94 Percent of imports and exports are carried by marine transportation**

# What is Maritime Research?

- In 1973, the Panel for Support for Maritime Research and Education of the National Research Council, of the National Academies of Science defined maritime research as

***“Short and long term research that is specifically concerned with the waterborne transportation of goods and people”***

# Recommendations from the National Academy of Sciences – 1960 Study

- **“1. The Maritime Administration should give favorable consideration to establishing five-year programs of sustained grants-in-aid to those universities which are particularly interested and well qualified to carry out maritime research.**
- **2. The Maritime Administration should establish a program of 20 to 30 annual unconditional fellowships for advanced study in maritime or related fields.”**

**(National Academy of Sciences Research Advisory Committee, 1960)**

# National Research Council Study on Maritime Research at Universities

In 1973 The Panel for Support for Maritime Research and Education of the National Research Council addressed the question:

*“What support, if any, should universities and non-profit institutions receive from the federal government and the maritime industry?”*

**Summary of Findings: Maritime Research at Universities is vitally needed but is woefully insufficient, lacks funding and where undertaken lacks unified direction.**

# **NRC 1973 Study Recommendations**

- **The US Maritime Administration (MARAD) should contract with and fund a consortium of universities to establish an institute for advanced maritime management studies**
- **MARAD should continuously provide federal funding to universities with marine engineering and naval architecture programs.**
- **MARAD should establish and fund a program to respond to unsolicited research proposals from universities in a manner comparable to the National Science Foundation**

# Continued Calls for Maritime Research

- *“Increased investment in research and development efforts is critical to enabling necessary improvements in the marine transportation system. We must meet the nation's projected increased cargo flow demands in an efficient, safe, secure, and environmentally responsible manner.”*
- Former U.S. Secretary of Transportation Norman Y. Mineta, 2003

# 2004 Study Research Recommendation

- *“The Secretary of Transportation should seek from Congress the means to undertake, in collaboration with industry and other federal agencies, an applied research and technology program aimed at furthering the capacity, safety, environmental protection, and security of the nation’s ports, intermodal connections, and other marine facilities and services.”*

Committee for the Study of the Federal Role in Marine Transportation, 2004

# **Zero Based Funding For Maritime Research**

- **The US Maritime Administration (MARAD) in their 2002 report to Congress on maritime research pointed out that from 1996-2001 dedicated funding for maritime technology or research and development investment was zero.**
- **MARAD's R&D funding budget from 2001 to 2009 has been zero.**

# **Non-MARAD Federal Funding of Maritime Research**

- **Research is fragmented**
- **Research is project based**
- **Not continuous for universities**
- **Maritime transportation is not the mission of these agencies**
  - **Department of Defense**
  - **Department of Commerce**
  - **Department of Agriculture**
  - **Department of Homeland Security**

# **Issues in Maritime Research at Universities**

- **Fragmented federal direction of the marine transportation system**
- **No unified agenda for maritime research**
- **Lack of adequate and continuous funding to support maritime research communities**
- **Minimal involvement with marine transportation in state governments**
- **Lack of faculty with maritime expertise**

# **National Maritime Enhancement Institutes (NMEIs)**

- **The Maritime Administration was authorized under Public Law 101-115 to designate National Maritime Enhancement Institutes at U.S. universities or university consortia with capabilities for providing leadership in the solution of national problems.**
- **The NMEIs were designated equivalent to UTCs under law but have never been integrated into The Research and Innovative Technology Administration (RITA)**

# National Maritime Enhancement Institutes

Programs of institutes evaluated by the US Maritime Administration. Designated by the US Secretary of Transportation

- Louisiana State University-New Orleans Gulf
- Marshall University, WV Ohio
- Massachusetts Institute of Technology Atlantic
- Memphis State University Mississippi
- Texas Transportation Institute Gulf
- University of California at Berkeley Pacific\*
- U.S. Merchant Marine Academy Atlantic
- Great Lakes Maritime Research Institute Great Lakes

\* In 2009 officially dropped out of the program

## **Additional Examples of Maritime Research at Universities**

- **Ship Operations Cooperative Program (SOCP) – Allowed research universities in 2008**
- **Sea Grant – U of Rhode Island, U of Washington, U of Delaware**
- **Center for the Commercial Deployment of Transportation Technology – UC-Long Beach**
- **Center for Advanced Infrastructure and Transportation – Rutgers**

# Maritime Research Funding

**Funding must be Continuous & Sufficient**

## **Options and Issues:**

- **Slice the existing pie of federal funds different**
  - Reprioritize existing transportation research
  - Will be fought by existing centers if felt threatened
- **Use existing research federal funds “smarter”**
  - Possible but how much excess in system and who makes call?
- **Find additional federal funds to support maritime research**
  - Tight budgets and no new taxes
  - Source of funds clearly tied to maritime transportation

# **A Concept for Establishing a National Maritime Research Program**

- **Amend the Harbor Maintenance Tax Act (HMT) authorizing a portion of the annual revenues dedicated to a National University Maritime Research Program**
  - **2007 annual income \$1.4 billion spend \$506 million**
  - **In 2008 the HMT had a \$3.8 billion surplus**
- **Authorize and appropriate on a five year basis approximately 3% of the (HMT) tax annual revenues to support Maritime Research. In 2008 that amount would be \$42 million.**

## **A Lead Agency and Unified Research Agendas**

- **10% of funds to provide administrative support for a principal USDOT agency to manage the research program.**
- **The research program should participate in RITA Chapter 9 Partnerships.**
- **Research agendas established through interagency collaborative efforts**
- **Research agenda input would be sought from**
  - **The Interagency Committee on the Marine Transportation System,**
  - **Marine Transportation System National Advisory Committee,**
  - **Transportation Research Board and state DOTs**

# **Continuous and Project Funding for University Maritime Research**

- 60% of the funds to provide a baseline budget for supporting the National Maritime Enhancement Institutes with five-year programs of sustained grants-in-aid to carry out maritime research.**
- The funding should include annual unconditional fellowships for advanced study in maritime transportation.**
- 30% of funds would be used to establish and fund a program to respond to unsolicited maritime research proposals from universities in a manner comparable to the National Science foundation or the National Cooperative Highway Research Program (NCHRP)**



# Great Lakes Maritime Research Institute

*A University of Wisconsin-Superior and  
University of Minnesota Duluth Consortium*

# Thank You!



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